

Receiving Report

Date:

15-01-9

Batch No:

131410

Supplier:

KLY

Dart P/O:

27254

Packing Slip:

Yes ☒

No ☐

Invoice:

Yes ☒

No ☐

Receipt:

Cash ☐

Cr ☒

New Supplier

Yes ☐

No ☒

Release Note Attached:

Yes ☒

No ☐

N/A ☐

Waybill Attached:

Yes ☒

No ☐

Shipment Complete:

Yes ☒

No ☐

N/A ☐

QC18 Inspection

☐

N/A ☒

Work Order

☐

N/A ☒

Discrepancies

| Part Number | Description | Quantity Ordered | Quantity Rec'd | Quantity Short | Quantity Inspected | Quantity Rejected | Comment / NCR Number |
|-------------|-------------|------------------|----------------|----------------|--------------------|-------------------|----------------------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Initials of Receiver

QC12

SP

Production/Admin:

Date

Received/Costing

Initial

Location



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO27256**

Purchase Order Date 1/28/2015

PO Print Date 1/28/2015

Page Number 1 of 2

Order From :
KLX INC.
88289 EXPEDITE WAY

VU-KLX01

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

CHICAGO, IL 33172
USA

Contact Name
Vendor Phone 305-925-2600

Ship To Contact
Ship To Phone
Ship Via: FedEx Overnight collect
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency USD
FOB Destination-Collect

| Line Nbr | Reference Vendor Part Number Line Comments Delivery Comments | Description/ Mfg ID | Req Date/ Taxable Promise Date | CD | Req Qty/ Unit of Measure | PO Unit Price | Extended Price |
|-------------|---|------------------------|--------------------------------------|----|--------------------------------|---------------|-------------------|
| 1 | 80-004-2-8 | INSERT | 1/29/2015 Yes 1/29/2015 | | 20.00 Each | \$3.25 | \$65.00 |
| Line Total: | | | | | | | \$65.00 |
| 2 | MS24694-S50 | Screw | 1/29/2015 Yes 1/29/2015 | | 500.00 Each | \$0.08 | \$40.00 |
| Line Total: | | | | | | | \$40.00 |
| 3 | MS21209F7-15 | Heli-Coil, Locking | 1/29/2015 Yes 1/29/2015 | FN | 200.00 Each | \$0.52 | \$104.00 |

SP15-01-29

Note:

1/28/2015



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO27256

| LINE# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER | CCODE | MFR DATE | EXP DATE |
|-------|----------|-----|-------------|-----------|------------|---------------|-------|----------|----------|
| 4 | 200 | EA | AN4C6A | | 68619 | MAC FASTENERS | | DRFT4 | |



Jason Lewis
Senior Director, Global Quality

01/28/15

Inv # 01/28/15

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0RAE84

PART NUMBER: AN4C6A

REV: 3

LOT NUMBER: 68619

MANUFACTURED QUANTITY: 43,000

MILL HEAT NUMBER: 571573

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners certifies that the parts referenced in the above lot number
do not contain Mercury or Mercury compounds, and were
manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC
FASTENERS within the United States, and were processed in accordance with all applicable drawings and
specifications. Objective evidence of compliance is on file, subject to examination upon request.

Mac Fasteners is a DISC QSLM approved Manufacturer - CAGE Code 0RFT4
Mac Fasteners is an Airbus approved Supplier - 203399

DATE: 10/31/14


QUALITY ASSURANCE REPRESENTATIVE

MAC FASTENERS, INC.
1110 EAST ENTERPRISE
OTTAWA, KS 66067

CHEMICAL & PHYSICAL TEST REPORT

| | | | |
|---------------------------|---------------------|------------------------|------------------------------|
| CUSTOMER B/E AEROSPACE | PO NUMBER ORAE84 | MFG QUANTITY 43,000 | DATE 10/31/14 |
| PART NUMBER AN4C6A | REV 3 | LOT NO 68619 | PROCUREMENT SPEC NASM6812 |

| | | | | | | | | | | | | | |
|----------------------|-----------|-----------|-----------|-------------------------------------|----|------------|------------|----------------------------|----|---|-----------------------|-------|----|
| MATERIAL TYPE 431 | | | | MATERIAL SPECIFICATION ASTM A493 | | | | MILL HEAT NUMBER 571573 | | | SUPPLIER CARPENTER | | |
| C .16 | Si .53 | Mn .63 | P .016 | S .002 | Cu | Ni 1.55 | Cr 16.1 | Mo | V | B | Fe | Al | Ti |
| | Co | N | Bi | Pb | Mg | Zn | | Nb | Sn | | | Other | |

MECHANICAL TEST RESULTS - TESTING PER NASM1312

| ULTIMATE TENSILE STRENGTH POUNDS | |
|-------------------------------------|-------|
| 6,430 | |
| 6,450 | |
| 6,360 | |
| 6,490 | |
| 6,300 | |
| MIN. REQ. | 4,080 |

| DOUBLE SHEAR STRENGTH POUNDS / PSI | |
|---------------------------------------|--|
| TOO SHORT TO TEST PER NASM1312-13 | |
| MIN. REQ. | |

| HARDNESS | |
|--------------------|-------------|
| ROCKWELL "C" SCALE | |
| REQ. | 26 - 32 HRC |
| SAMPLE SIZE | 5 |
| ACTUAL RESULTS | |
| 29 - 31 HRC | |

| METALLURGICAL EXAMINATION | | | |
|---|-------------------------------------|----------------|-------------------------------------|
| Discontinuities | <input checked="" type="checkbox"/> | Carb/Decarb | <input checked="" type="checkbox"/> |
| Grain Flow | <input checked="" type="checkbox"/> | Microstructure | <input checked="" type="checkbox"/> |
| Grain Size | <input checked="" type="checkbox"/> | Appearance | <input checked="" type="checkbox"/> |
| Thread Inspection System <input type="checkbox"/> 21 System <input checked="" type="checkbox"/> 22 System <input type="checkbox"/> 23 FED-STD-H28/20 - ASME B1.3 | | | |

| NDT/ ADDITIONAL TESTS | |
|---|-------------------------------------|
| Magnetic Particle Inspection per ASTM E1444 | <input checked="" type="checkbox"/> |
| Liquid Penetrant Inspection per ASTM E1417 | <input type="checkbox"/> |
| Head Marking | <input checked="" type="checkbox"/> |
| Fatigue Strength | <input type="checkbox"/> |
| Stress Durability Test NASM1312/5 | <input type="checkbox"/> |
| Stress Rupture Test | <input type="checkbox"/> |
| Magnetic Permeability ASTM A342 Less than 2.0 | <input type="checkbox"/> |

TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.


Quality Assurance Representative

Paulo Products Co Heat Treat Certification

| PART NUMBER | PO # | LOT/ JOB # | QTY | NET WT | MTL | HRC REQ'D | # OF SAMP | PAULO ORDER # | RESULTS | EQUIP/ CYCLE ID | *AUSTENTIZE* | EQUIP ID | *TEMPER* |
|-------------|--------|---------------|--------|--------|-----|--------------|--------------|------------------|-------------|--------------------|----------------|----------|---------------|
| | | | | | | | | | | | TEMP/ TIME | | TEMP/ TIME |
| AN3C4A | 105203 | 65306 | 40,000 | 315.8 | 431 | 26- 32 | 8 | 1281712-01 | 27 - 30 HRC | 1204/178216-1 | 1875±25°/50min | 1233 | 1175±15°/4hrs |
| AN173C4 | 105205 | 72223 | 1,000 | 8.6 | 431 | 26- 32 | 8 | 1281712-02 | 26 - 30 HRC | 1204/178216-1 | 1875±25°/50min | 1233 | 1175±15°/4hrs |
| AN4C25 | 105404 | 72094 | 3,000 | 140.6 | 431 | 26- 32 | 8 | 1282407-09 | 26 - 32 HRC | 1204/178216-1 | 1875±25°/50min | 1233 | 1175±15°/4hrs |
| AN4C6A | 105406 | 68619 | 50,000 | 739.2 | 431 | 26- 32 | 8 | 1282407-10 | 29 - 31 HRC | 1204/178216-1 | 1875±25°/50min | 1233 | 1175±15°/4hrs |

CERTIFICATION

WE CERTIFY THAT THE ABOVE REFERENCED PARTS WERE HEAT TREATED IN ACCORDANCE WITH AMS2759 AND CUSTOMER REQUIREMENTS. SAMPLES HAVE BEEN TESTED TO VERIFY HARDNESS AS SPECIFIED PER CUSTOMER REQUIREMENTS. PAULO PRODUCTS, INC. IS A NADCAP CERTIFIED PROCESSOR.

INSPECTOR

[Signature]

DATE

10/17/14

APPROVED BY

[Signature]

Results: ** denotes (Customer Accepted AS-IS - Deviation on File)

DE TRAY Plating Works

Specialized Electro-Plating and Polishing
Nickel
Copper
Decorative Chrome
Satin Chrome
Zinc
Cadmium
Passivate
Bright Dip
Strip Copper
Descale

10405 EAST ELEVENTH STREET • INDEPENDENCE, MISSOURI 64052
Phone (816) 252-8411 Fax (816) 252-8527 • E-mail : DeTrayPlating@Aol.com

Passivate Treatment per AMS2700 Method 1, Class 4

CUSTOMER: Mac Fasteners Lot#: 68619
PART NUMBER: AN4C6A
PROCUREMENT SPECIFICATION: n/a
OTHER CONTRACTURAL REQUIREMENTS:
MATERIAL: 431
QUANTITY: 705 lbs
INVOICE NUMBER: 184693

Certification Statement:

We certify that the above referenced lot was processed, tested, and inspected in accordance with AMS2700 Method 1, Class 4 and part standard.

DE TRAY PLATING WORKS

NAME: James V. Wilson

JOB TITLE: VICE-PRESIDENT

DATE: 10/30/2014

CERTIFICATE OF TESTS
ABNAHMEPRUEFZEUGNIS
CERTIFICAT DE CONTROLE

CERT SERIAL# 000936670



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

07/09/14

CUSTOMER / BESTELLER / CLIENT

SELLER / VERKÄUFER / VENDEUR PAGE 1 OF 1

MAC FASTENERS INC

1110 E. ENTERPRISE
OTTAWA KS 66067

BOL

| CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE | CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE | DATE/DATUM/DATE | WEIGHT/GEWICHT/POIDS |
|---|---|-----------------|----------------------|
| 92916 | W94092 | 07/09/14 | 6624.000 |

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 571573

PRODUCT DESCRIPTION: TYPE 431 ANNEALED COLD FINISH SEAM FREE C HDG SC2 STRAND
----- CU/SOAP TENSILE MAX 115.0 KSI AIM: MIN 100.0 MAX 110.0
PART NUMBER: 431-.247

SPECIFICATION: ASTM-A493-09 (REAPPROVED 2013)

SIZE 0.247000 IN. (6.27 MM) RD WIRE

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

| | | | | | |
|---------|---------|---------|---------|---------|---------|
| C (COM) | MN(XRF) | SI(XRF) | P (XRF) | S (COM) | CR(XRF) |
| 0.16 | 0.63 | 0.53 | 0.016 | 0.002 | 16.1 |
| NI(XRF) | | | | | |
| 1.55 | | | | | |

THIS HEAT MELTED BY THE ELECTRIC ARC/AOD PROCESSES

TENSILE AS SHIPPED, KSI(MPA) 99.0(683)

MATERIAL HAS BEEN MELTED AND MANUFACTURED IN THE USA WHICH IS A QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009.

THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 31 DATED 09/03/13.

CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2013 TO THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 13-1996R BY PERFORMANCE REVIEW INSTITUTE. THIS CERTIFICATE OF TEST IS TYPE 3.1 PREPARED IN ACCORDANCE WITH EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS, AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

GARY BROWN
MANAGER - SPECIFICATIONS/CERTIFICATIONS
CARPENTER TECHNOLOGY CORPORATION

This certification is made to the customer printed on this form. Carpenter neither makes, nor assumes responsibility for, any representation or certification to other parties.
Die vorliegende Zertifizierung ist nur für den in diesem Formular genannten Kunden gültig. Carpenter übernimmt gegenüber Dritten keinerlei Haftung für die ausgewiesenen Daten oder Zertifizierungen.
Ce certificat est uniquement valable pour le client dont le nom est imprimé sur ce formulaire. Carpenter n'assume pas de responsabilité pour une certification vis-à-vis d'une tierce personne.



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.KLXaerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO27256

| LINE# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER | CCODE | MFR DATE | EXP DATE |
|-------|----------|-----|-------------|-----------|------------|-----------------|-------|----------|----------|
| 1 | 20 | EA | 80-004-2-8 | | 51966 | YOUNG ENGINEERS | 56958 | | |


Jason Lewis
Senior Director, Global Quality

01/28/15



The YOUNG ENGINEERS, Inc.

engineering • manufacturing • aerospace fasteners

25841 Commercentre Drive, Lake Forest, California 92630 USA
Mail Add: PO Box 278, Lake Forest, California 92609-0278 USA
(949) 581-9411 Fax (949) 583-7662
email: sales@youngengineers.com

CERTIFICATE OF CONFORMANCE

Packing Slip 51490

Customer Purchase Order 0SWY32

Sales Order 30250

Ship Date 2/26/2014

Page Number 1

Bill To

2030
B/E AEROSPACE INC
CONSUMABLES MANAGEMENT
PO BOX 025263
MIAMI, FL 33102-5263
USA

Ship To

B/E AEROSPACE INC
9835 NW 14 STREET
MIAMI, FL 33172
USA

| Line Nbr / Cust Ln | Item ID / Alt Item ID | Description | Lot Number | Lot Trans Qty |
|-----------------------|--------------------------|---|------------|---------------|
| ★ 1 | TYE3002-3-8 | 10-32 Blind Thrd, Snap In, Alloy Stl, .010- .019 Skin | | |
| | | Thickness, Self-Lock, .500OD X .455OAL | | |
| 1 | 80-004-2-8 | | 51966 | 2,500 |
| | Rev. V | | | |
| 2 | | Test Report | | |
| 2 | | | | |

Special Inst

FedEx Acct 0331-0149-0

The use of Class 1 Ozone depleting substances; nor the use of Mercury, Mercury compounds or Mercury Bearing Instruments, and/or equipment, have not been used in the design, testing, manufacture, assembly, integration, handling, packaging of this product.



The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

The items(s) which are identified within this certification have been reviewed and verified for compliance to those requirements specified within DFARS 252.225.7014 ALT 1 and DFARS 252.225.7009

| ITAR | ECCN Code | HTS (Schedule B) Code |
|------|--------------|-----------------------|
| N/A | (NLR) EAR 99 | 8803.30.00 |

CERTIFICATE OF CONFORMANCE

We Certify that the furnished parts have been manufactured, inspected, tested, and unless otherwise stated above, conform with applicable specifications, drawings and purchase order requirements. Inspection, test data and/or material certifications are on file and available for examination at our facility. We further certify that these articles are of United States origin, manufactured by/for The Young Engineers, Inc.

Authorized Signature

By

Gretchen Delaney
Office Manager

FEB 26 2014



SDF-03-07

The YOUNG ENGINEERS, Inc.

Manufacturing Operations Sheet

Work Order ID 51966

Item ID TYE3002-3-8

Descrip 10-32 Blind Thrd, Snap In, Alloy Stl, .010- .019 Skin Thickness, Self-Lock, .500OD X .455OAL

Job Qty 7,500 Lot No 11-12-13

Customer ID 2007

Lot Qty Date Printed 9/13/2013

Start Date 11/7/2013

Due Date 2/7/2014

| | | | | | | | | | | | |
|---|------------------|---|-----------------------|---|----|----------|-----|-----|----------|------|-------|
| Eng Planning By <u>RC</u> Date <u>9/16/13</u> | | Manufacture Per Dwg No <u>TYE3002-1301-8</u> Rev <u>D</u> Final Inspect Per Dwg No <u>TYE3002-series</u> Rev <u>A</u> <input type="checkbox"/> Customer Release <input checked="" type="checkbox"/> TYE Catalog <input type="checkbox"/> Final Inspection Release <input type="checkbox"/> Assembly Release | | <input type="checkbox"/> If this box is marked, these parts were manufactured by altering the base parts identified in the Material Planning Sheet accompanying this packet | | | | | | | |
| PC Planning By <u>ES</u> Date <u>9/13/13</u> | | CNC Lathe Program No <u>04828465</u> Cycle Time <u>55sec</u> Mach No <u>36-A</u> 1st Op <u>04828465</u> 2nd Op <u>55sec</u> | | | | | | | | | |
| Seq ID | Operator Initial | Work Center | Operation Description | Inspection 1st Rec/Art Final | NA | Quantity | Ac# | Re# | QA Stamp | Date | NCR # |

| | | | | | | | | | | | |
|-----|--------------|------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------|-----------|----------|------------|--------------------|
| 10 | | WOP | Standard Work Order Preparation | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | |
| 20 | <u>AG</u> | M | M1 Raw Material Preparation | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | |
| 30 | <u>HL</u> | CN | CNI CNC Lathe 1st Op Machining | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>9855</u> | <u>1</u> | <u>0</u> | <u>TYE</u> | <u>JAN 09 2014</u> |
| | | Memo | Use 'BEFORE PLATE' Gage | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| 40 | <u>LY</u> | M | M2 Wash | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <u>9858</u> | | | | |
| 50 | <u>TD</u> | C. | (3MC) C1 Hand Coin | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>9802</u> | <u>1</u> | <u>0</u> | <u>TYE</u> | <u>2/3/14</u> |
| 55 | <u>PT/GC</u> | D | D71 CNC Potting Holes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>9800</u> | <u>1</u> | <u>0</u> | <u>TYE</u> | <u>2/6/14</u> |
| 60 | <u>LY</u> | M | M2 Wash | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <u>9800</u> | | | | |
| 70 | <u>BL</u> | P | P8C Flats (Hand Load Feed) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>9770</u> | <u>1</u> | <u>0</u> | <u>TYE</u> | <u>2/19/14</u> |
| 80 | <u>LY</u> | M | M3 Tumble | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <u>9689</u> | | | | |
| 90 | <u>LY</u> | M | M2 Wash | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <u>9689</u> | | | | |
| 100 | <u>TEF</u> | RMF | * Cad Plate Per AMS-QQ-P-416, Type II, Class 2 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>9689</u> | <u>32</u> | <u>0</u> | <u>TYE</u> | <u>FEB 25 2014</u> |
| 110 | <u>TEF</u> | QA | Quality Assurance Final | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>9689</u> | <u>32</u> | <u>0</u> | <u>TYE</u> | <u>FEB 25 2014</u> |

Inspection Level: ☒ S-3 AQL 1.0 ☐ AQL

QA Planning By TEF Date SEP 19 2013

3 Container(s) Type: ☒ Bucket ☐ Weight (lbs) 81

Comments: * MIN TIC 2/20/14 TIA

Count Factor 3.4014

*Per ANSI/ASQC Z1.4-1993

TYE
3

FEB 26 2014

Rev I 03/02

The YOUNG ENGINEERS, Inc.

These Test Reports Apply To:
 Customer Name: DE MONTAG
 Customer P.O. No: 05W1351
 Part No: 20.004.3-8
 Rev No: 2500
 Quantity: 107984
 TYE Invoice No: 14
 Pages this report: 14
 Date: 2-26-14
 Signature: [Signature]
 Office Manager: [Signature] of 7

Work Order Package Review

TYE QA Inspector Stamp# CE

Date: FEB 26 2014

EDF-05-01



The YOUNG ENGINEERS, Inc. Manufacturing Operations Sheet

Unless otherwise indicated, all operations to be inspected at 4 hour intervals. QA Apvl [Signature] Date SEP 19 2013

Special Inspection Interval: Operation(s) Interval QA Apvl Date

Additional Inspection Interval Requirements

| Op No | Inspect Time | Type/Count | Total Pieces Accept/Reject | Sample Size | Sample Ac/Re | | QA Stamp | Date | Notes |
|-------|--------------|------------|----------------------------|-------------|--------------|------|----------|-------------|-----------------|
| | | | | | Ac # | Re # | | | |
| 30 | 1:00 | P/R | | 1 | 1 | 6 | [Stamp] | JAN 09 2014 | TYE M-15 1/9/14 |
| 30 | 10:00 | 3C-A | 400 | 8 | 8 | 0 | [Stamp] | 1/9/14 | |
| 30 | 14:00 | 3C-A | 360 | 5 | 5 | 0 | [Stamp] | 1/9/14 | |
| 30 | 18:00 | 3C-A | 150 | 5 | 5 | 0 | [Stamp] | 1/9/14 | |
| 30 | 22:00 | 3C-A | 150 | 5 | 5 | 0 | [Stamp] | 1/9/14 | |
| 30 | 2:00 | 3CA | 550 | 13 | 13 | 0 | [Stamp] | 1/10/14 | |
| 30 | 6:00 | 3CA | 200 | 8 | 8 | 0 | [Stamp] | 1/10/14 | |
| 30 | 10:00 | 3CA | 200 | 8 | 8 | 0 | [Stamp] | 1/10/14 | |
| 30 | 14:00 | 3CA | 200 | 8 | 8 | 0 | [Stamp] | 1/10/14 | |
| 30 | 18:00 | 3CA | 300 | 8 | 8 | 0 | [Stamp] | 1/10/14 | |
| 30 | 22:00 | 3CA | 300 | 8 | 8 | 0 | [Stamp] | 1/10/14 | |
| 30 | 2:00 | 3CA | 0 | 0 | 0 | 0 | [Stamp] | 1/10/14 | |
| 30 | 10:00 | 3CA | 150 | 8 | 8 | 0 | [Stamp] | 1/13/14 | NO OPERATED |
| 30 | 14:00 | 3CA | 150 | 8 | 8 | 0 | [Stamp] | 1/13/14 | |
| 30 | 18:00 | 3CA | 100 | 8 | 8 | 0 | [Stamp] | 1/13/14 | |
| 30 | 22:00 | 3CA | 0 | 0 | 0 | 0 | [Stamp] | 1/13/14 | |
| 30 | 6:00 | 3C-A | 400 | 8 | 8 | 0 | [Stamp] | 1/14/14 | mach down |
| 30 | 10:00 | 3C-A | 370 | 8 | 8 | 0 | [Stamp] | 1/14/14 | |
| 30 | 14:00 | 3C-A | 350 | 8 | 8 | 0 | [Stamp] | 1/14/14 | |
| 30 | 18:00 | 3CA | 250 | 8 | 8 | 0 | [Stamp] | 1/14/14 | |
| 30 | 22:00 | 3CA | 250 | 8 | 8 | 0 | [Stamp] | 1/14/14 | |
| 30 | 6:00 | 3C-A | 570 | 8 | 8 | 0 | [Stamp] | 1/15/14 | |
| 30 | 10:00 | 3C-A | 230 | 8 | 8 | 0 | [Stamp] | 1/15/14 | |

In-Process Locking Torque Register (Bolt Number NAS 1096-3-7 Bolt PO Number 136540 Wrench Tool No TC27.1)

6.0-4.0
6.0-4.0
5.5-3.5
5.5-3.5
6.0-4.0
6.0-4.0
6.0-4.0

Comments and/or Special Instructions



The YOUNG ENGINEERS, Inc.

Manufacturing Operations Sheet

Job No 51966 Part No TYE 3002-3-8

In Process Inspection Interval

Unless otherwise indicated, all operations to be inspected at 4 hour intervals.

QA Apvl



Date 1/16/14

Additional Inspection Interval Requirements

Special Inspection Interval: Operation(s)

Interval

QA Apvl

Date

| Op No | Inspect Time | Type/Count | Total Pieces Accept/Reject | Sample Size | Sample Ac/Re | | QA Stamp | Date | Notes |
|-------|--------------|------------|----------------------------|-------------|--------------|------|----------|---------|-------------------|
| | | | | | Ac # | Re # | | | |
| 30 | 6:00 | 3C-A | 400 | 8 | 8 | 0 | TYE | 1/16/14 | |
| 30 | 10:00 | 10 | 370 | 20 | 20 | 0 | TYE | 1/16/14 | |
| 30 | 14:00 | 3EA | 200 | 5 | 5 | 0 | TYE | 1/16/14 | |
| 30 | 18:00 | 3C-A | 200 | 2 | 2 | 0 | TYE | 1/16/14 | |
| 30 | 22:00 | 3C-A | 200 | 8 | 8 | 0 | TYE | 1/16/14 | |
| 30 | 6:00 | 3C-A | 500 | 8 | 8 | 0 | TYE | 1/17/14 | |
| 30 | 10:00 | 3C-A | 500 | 8 | 8 | 0 | TYE | 1/17/14 | |
| 30 | 14:00 | 3C-A | 400 | 8 | 8 | 0 | TYE | 1/17/14 | |
| 30 | 18:00 | 3C-A | 215 | 8 | 8 | 0 | TYE | 1/17/14 | |
| 30 | 18:15 | L/P | All | 1 | 1 | 0 | TYE | 1/17/14 | |
| 50 | 13:30 | F/A | 1 | 1 | 1 | 0 | TYE | 2/3/14 | 7.0-5.0 |
| 50 | 6:00 | 3M | 8,000 | 20 | 20 | 0 | TYE | 2/4/14 | 5.0-4.0/5.0-4.0 * |
| 50 | 7:00 | L/P | All | 1 | 1 | 0 | TYE | 2/4/14 | 6.0-5.0/5.0-4.0 * |
| 65 | 12:00 | F/A | 1 | 1 | 1 | 0 | TYE | 2/6/14 | 6.0-5.0 |
| 65 | 7:00 | 3M | 463 | 8 | 8 | 0 | TYE | 2/7/14 | |
| 65 | 10:00 | 3M | 900 | 13 | 13 | 0 | TYE | 2/7/14 | |
| 55 | 14:00 | U | 500 | 8 | 8 | 0 | TYE M-14 | 2/7/14 | |
| 55 | 10:00 | U | 2200 | 13 | 13 | 0 | TYE M-14 | 2/9/14 | |
| 55 | 18:00 | 3M | 800 | 13 | 13 | 0 | TYE M-13 | 2-11-14 | |
| 55 | 22:00 | 3M | 800 | 13 | 13 | 0 | TYE M-13 | 2-11-14 | |
| 55 | 18:00 | 3M | 3900 | 20 | 20 | 0 | TYE M-13 | 2-12-14 | |
| 55 | 19:00 | L/P | All | 1 | 1 | 0 | TYE M-13 | 2-12-14 | |

In-Process Locking Torque Register (continued)

Comments and/or Special Instructions



Job No 51966 Part No TYE 3002-3-8

In Process Inspection Interval

Unless otherwise indicated, all operations to be inspected at 7 hour intervals.

QA Adv

Date 1 9 2014

Additional Inspection Interval Requirements

Special Inspection Interval: Operation(s)

Interval

QA Advl

Date _____

In-Process Locking Torque Register (continued)

Comments and/or Special Instructions

The YOUNG ENGINEERS, Inc.

Material Planning Sheet

Work Order ID 51966

Parent Item ID TYE3002-3-8

Item Description 10-32 Blind Thrd, Snap In, Alloy Stl, .010- .019 Skin Thickness, Self-Lock, .500OD X .455OAL

Job Qty 9,500 Lot No Lot Qty Date Printed 1/7/2014 Due Date 2/7/2014

Engineering Approval
By UP Date 1/7/14

| Component Item ID/ Item Name | Mfg / Purch | Primary Location | Last Location | Unit of Measure | Qty on Hand | Qty To Pick | Qty Issued | QA Stamp | Date Issued |
|---------------------------------|-------------|---------------------|------------------|--------------------|----------------|----------------|---------------|-------------|----------------|
|---------------------------------|-------------|---------------------|------------------|--------------------|----------------|----------------|---------------|-------------|----------------|

1/2 4130 Cond F Purchased
Steel Bar(s) per AMS-S-6758; (125 - 145 UTS)

Bar 90 48

48

(TYE) JAN 07 2014

| Location | Lot / Heat | PO No | Loc Qty | Loc Code |
|-----------|------------|--------|---------|----------|
| STOCK BAR | A1332U | 140935 | 90.0 | |
| | | | 90.0 | |

4871 1/17/14 EA

The YOUNG ENGINEERS, Inc.

First Article Inspection Report

Job No 51966 Part No TYE 3002-3-8 Date 1/9/14 Page 25 of 27
 Document(s) Used: ☒ TYE Production Release ☐ Other _____
 Document No TYE 3002-(38)-8 Rev D
 Job Qty 9,500 Qty Submitted 1 Qty Accept 1 Qty Reject 0
 Name of Inspector V. RUIZ NCR No¹ _____

Visual Inspection: ☒ Acceptable ☐ Not Acceptable¹

| OP No. | Item No | Drawing Dimension (.000 ± .005" Unless Indicated) | Actual Dimensions (low/high) | Ac | Re ¹ | Instrument Type | Serial No |
|--------|---------|--|---------------------------------|-----|-----------------|--------------------|--------------|
| 30 | 1 | φ.446 | .447 | YES | | CAL | T621 |
| | 2 | φ.250 ± .002 | .2493 | YES | | BLADE MIC | T099 |
| | 3 | .050 | .050 | YES | | CAL | T621 |
| | 4 | 2X R.015 ± .010 | .009 - .011 | YES | | COMP | T588 |
| | 5 | .455 | .456 | YES | | CAL | T621 |
| | 6 | .015 ± .002 | .0160 | YES | | COMP | T588 |
| | 7 | .120 | .121 | YES | | COMP | T588 |
| | 8 | 16-20 TPI X 25 ± .5 | 20 TPI X 30 | YES | | COMP | T588 |
| | 9 | 15° BK | 15° BK | YES | | COMP | T588 |
| | 10 | φ.470 ± .002 | .4695 | YES | | BLADE MIC | T099 |
| | 11 | 60° ± 30' | 60° | YES | | COMP | T588 |
| | 12 | .021 ± .002 | .0211 | YES | | COMP | T588 |
| | 13 | .330 MFT | .336 MFT | YES | | T-GAGE COMP | T561 |
| | 14 | .030 MIN | .040 MIN | YES | | DROP IND | T592 |
| | 15 | φ.480 ± .002 AK | .4816 AK | YES | | OD MIC | T622 |
| | 16 | φ.500 | .501 | YES | | CAL | T621 |
| | 17 | 1900-32 UNJF 3B | OK PER T-GAGE | YES | | T-GAGE | T561 |
| | 18 | MINOR φ.1605-.1615 | .16160/.167 NO | YES | | PINS | T519 |
| | 19 | PD .1705-.1730 | .1719 | YES | | PD SEE ITC | 546/1581 |
| | 20 | FD .1705 MIN | .1724 | YES | | FD MASTER SEE RING | 552/1544 |
| | 21 | φ.205 X 60° ± 30' | .206 X 60° | YES | | COMP PROTRACTOR | T588 |
| | 22 | 125 | 125 | YES | | SR | T254 |
| 30 | 23 | T.T.005 MAX | .005 MAX | YES | | DROP IND | T592 |
| 50 | 24 | .16 ± .010 | .162 | YES | | COMP | T521 2/3/14 |
| 55 | 25 | .246 | .245 | YES | | CAL | T428A 2/6/14 |

Remarks (Refer to Item No) MEMOZ

¹ See Nonconformance Report for disposition, if applicable.

The YOUNG ENGINEERS, Inc.

First Article Inspection Report

Job No 51966 Part No TYE 3002-3-8 Date 2/6/14 Page of 20 of 2

Document(s) Used: ☒ TYE Production Release ☐ Other

Document No TYE 3002 - (08) - 8

Job Qty 9,500 Qty Submitted 1 Qty Accept 1 Qty Reject 0

Name of Inspector R. TORRES

NCR No1

Visual Inspection: ☒ Acceptable ☐ Not Acceptable¹

[illegible]

Remarks (Refer to Item No)

¹ See Nonconformance Report for disposition, if applicable.

The YOUNG ENGINEERS, Inc.

Final Inspection Report

Job No 51966 Part No TYE3002-3-8 Date FEB 25 2014
Document(s) Used: TYE Catalog Print Final Page 1 of 1

Document No. 77E3002 SERIES

Single Sampling Inspection Per ANSI/ASQC Z1.4 - 1993 [Level S-3, AQL 1.0]: ☒ Yes ☐ No [Level AQL]
Final Qty 9684 Sample Size 32

Final Qty 9684 Sample Size 32 Qty Accept 32 Qty Reject 0

NCR No¹

Visual Inspection: ☒ Acceptable ☐ Not Acceptable¹

| Item No | Drawing Dimension (.XXX: ± .010" Unless Indicated) | Actual Dimensions (low/high) | Ac | Re ¹ | Instrument Type | Serial No |
|---------|---|------------------------------|-----|-----------------|-----------------|-----------|
| 1 | 2x.093 | .09102/.09610 | YES | | PILB | TS79 |
| 2 | .500 | .499/.501 | YES | | Cal | FF4 |
| 3 | .120 | .122/.123 | YES | | Cal | TS4 |
| 4 | (.16) | .159/.161 | YES | | OPIC | TS21 |
| 5 | .250 | .250/.252 | YES | | Cal | TS4 |
| 6 | .190-32UNF-3B | 90 TURN TO C | YES | | F-gage | TS491 |
| 7 | .455 DAL | .455/.458 | YES | | Cal | TS4 |
| 8 | 125 ✓ | 125 ✓ | YES | | S/R | TS4 |

FOD Inspection Results

A total of 32 pieces of this lot were visually inspected for FOD inclusion. All pieces inspected were found to be free of FOD.

Stamp#

Date: _____

~~FEB 25 2014~~

Remarks (Refer to Item No)

See Nonconformance Report for disposition, if applicable

The YOUNG ENGINEERS, Inc.

Final Inspection Torque Test Record

WO No 51966 Part No TE-2002-3-B Date FEB 25 2014 Page 1 of 1

Thread Locking Values Per: ☒ NASM-25027 ☐ TYE Specification ☐ Other _____






Test Method/Sample Size Per: ☒ NASM-25027 ☐ TYE Specification ☐ Other _____

Acceptable Limits: Maximum Locking Value [In-lb] 18.0 Minimum Breakaway Value [In-lb] 2.0

Lot Qty 9684 Sample Size 5 Qty Accept 5 Qty Reject 0

Bolt Part No NAS1096-3-7 Bolt Lot No 136540 Instrument Serial No 7271

Name of Inspector T. Nguyen NCR No¹ _____

| Sample No | Max (1) | Break (1) | Max (7) | Break (7) | Max (15) | Break (15) | Ac | Re ¹ |
|-----------|---------|-----------|---------|-----------|----------|------------|--|-----------------|
| 1 | 8 | 7 | 6 | 6 | 5 | 5 |  | |
| 2 | 8 | 7 | 5 | 5 | 5 | 5 |  | |
| 3 | 8 | 7 | 6 | 5 | 5 | 5 |  | |
| 4 | 9 | 8 | 6 | 6 | 6 | 5 |  | |
| 5 | 7 | 6 | 5 | 4 | 4 | 4 |  | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
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| 9 | | | | | | | | |
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| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |

¹ See Nonconformance Report for disposition, if applicable.

* Identifies Potting hole Side (On Double Coined Parts)

3C-A 35 Sec

The YOUNG ENGINEERS, Inc.
Manufacturing Process Count Card Form

| Work Order ID <u>51966</u> | | | | | | | |
|----------------------------|-------------------|--------|---------------------|------------------|-------------------|--------------------|-------------|
| Operator Name | Pre-Process Count | Seq ID | Standard Process ID | Process Quantity | Operator Initials | Tool Cage Approval | Parts Lost* |
| Alex | 0 | 20 | M1 | 9500 | AG | AG | |
| HL | 0 | 2 | CN1 | 60 | HL | HL | |
| VIETNG | e | " | " | 750 | m | m | |
| MG | 0 | 20 | CN1 | 450 | MA | MA | |
| HL | 0 | 20 | CN1 | 270 | HL | HL | |
| VIETNG | e | " | " | 650 | m | m | |
| MG | 0 | 30 | CN1 | 590 | MA | MA | |
| VIETNG | e | " | " | 600 | m | m | |
| MA | 0 | 30 | CN1 | 360 | MA | MA | |
| HL | 0 | 20 | CN1 | 410 | HL | HL | |
| VIETNG | " | " | " | 680 | m | m | |
| MA | 0 | 30 | CN1 | 440 | MA | MA | |
| HL | 0 | 20 | CN1 | 520 | HL | HL | |
| VIETNG | e | " | " | 220 | m | m | |
| MA | 0 | 30 | CN1 | 430 | MA | MA | |
| HL | 0 | 20 | CN1 | 360 | HL | HL | |
| VIETNG | e | " | " | 650 | m | m | |
| MA | 0 | 30 | CN1 | 400 | MA | MA | |
| HL | 0 | 20 | CN1 | 500 | HL | HL | |
| VIETNG | " | " | " | 750 | m | m | |
| MA | 0 | 30 | CN1 | 725 | MA | MA | |
| James | 9858 | 40 | M2 | 9858 | LY | LY | |
| David | 9858 | 50 | C1 | 6000 | TD | TD | 40 |
| Final Quantity | | | | | Total Parts Lost | | |

*Includes setup & test pieces, etc.

Comments _____

The YOUNG ENGINEERS, Inc.
Manufacturing Process Count Card Form

| Work Order ID <u>51966</u> | | | | | | | |
|----------------------------|-------------------|--------|---------------------|------------------|-------------------|--------------------|-------------|
| Operator Name | Pre-Process Count | Seq ID | Standard Process ID | Process Quantity | Operator Initials | Tool Cage Approval | Parts Lost* |
| David | 9858 | 50 | C1 | 3802 | TD | TD | 12 |
| Phuoc | 9802 | 55 | D7I | 943 | PT | PT | |
| Hung | " | 55 | D7I | 2410 | HB | HB | |
| TS | " | 11 | D7I | 2218 | TH | TH | |
| GUAL | " | " | " | 385 | GC | GC | |
| Phuoc | " | " | " | 402 | PT | PT | |
| Phuoc | " | " | " | 810 | PT | | |
| Phuoc | " | " | " | 1602 | PT | PT | |
| Phuoc | " | " | " | 1030 | PT | PT | 2 |
| Leung | 9800 | 60 | M2 | 9800 | LY | LY | |
| Bao | 9800 | 70 | P24 | 9770 | BP | BP | 30 |
| Leung | 9689 | 80 | M3 | 9689 | LY | LY | 01 |
| Leung | 9689 | 90 | M2 | 9689 | LY | LY | |
| Phuoc | 9689 | 100 | RMF | 9689 | TH | | 1 |
| | 9684 | 110 | BAF | 9684 | TH | | 5 |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| Final Quantity | | | | 9684 | Total Parts Lost | | 153 |

*Includes setup & test pieces, etc.

Comments _____

Reld Metal Finishing
3110 West Harvard
Santa Ana, CA 92704
Phone: (714) 549-3771
Fax: (714) 549-3008

CERTIFICATION

P/L # 91927

02/24/2014

SOLD TO:

YOUNG ENGINEERS INC (THE)
PO BOX 278
LAKE FOREST, CA 92609-0278

SHIP TO:

YOUNG ENGINEERS INC (THE)
25841 COMMERCENTRE DRIVE
LAKE FOREST CA 92630

Ship: RMF Truck 1

Net 30 Days

| UNITS SHIPPED | PART # | DESCRIPTION | PO # | RMF # | REF # |
|---------------|-------------|-------------|--------|-------|-------|
| 9,689 qty. | TYE3002-3-8 | | 141782 | 94025 | 51966 |
| 0 B/O | 81.00 lbs. | | | | |

WE HEREBY CERTIFY COMPLIANCE TO THE BELOW REFERENCED PROCESS SPECIFICATION(S)

Cadmium Plate Type II Class 2 Chromate
AMS-QQ-P-416

Color: GOLD
Rev: C

CI 2-ID Thread-Meets Thickness Requirements: .0003 Min .0008 Max
Minimum Thickness Required

Sampling IAW ANSI / ASQC Z1.4 S-4-1993, Defects within a given batch or lot will be zero.



FEB 25 2014

Q.C. MANAGER:

Jules Antezor



Nadcap



Processes are performed by RMF in accordance with the latest revisions or superseding specifications. This certification also meets the requirements for designs and drawings developed under older revisions and/or non-current specifications. An Electro Technologies, Inc., Company.

The Young Engr's PO# 140935



**KIVETON PARK STEEL
LIMITED**

REGISTERED OFFICE: KIVETON PARK, SHEFFIELD, S26 6NQ.

TEL: (01909) 770252.
EMAIL: sales@kivestee.co.uk

FAX: (01909) 772849/773888.
WEBSITE: www.kivestee.co.uk



CIVIL AVIATION AUTHORITY REF NO: AM1963/48.
RAYTHEON APPROVAL: RAPSAS/PART3/7043

AIRBUS U.K. APPROVAL NO: AUN78A/30335.
AS/EN9100 REV B, BS EN ISO9001:2008 & AS9104: FMS166.

| CERTIFICATE OF CONFORMITY/APPROVED CERTIFICATE: | | | | NO: | | L0549. | | | | | | | | |
|--|-----------|--|---|--|-----------|---------------|---------------|-----------|------------|-----------------------------|-----------|-----------|-----------|--|
| ID: BARMOND INTERNATIONAL, A DIVISION OF KIVETON PARK STEEL LIMITED, KIVETON PARK, SHEFFIELD, S26 6NQ. | | | | DATE: 28 TH JUNE, 2013. ORDER NO: 3008.S. WORKS ORDER NO: KP 25138/CB 50791 SIZE: 4970/1.5000" DIAMETER. INGOMING R/NOTE NO: 00448298/1. | | | | | | | | | | |
| SPECIFICATION: E4130 F4 AMS-S-8758A MIL-S-8758B AMS8346A AMS2301K AMS2304B AMS8370N (TO CHEMISTRY ONLY) ASTM A331-95 ASTM A108 REV 7 AMS8348C AMS A322 REV 7 SAE AMS-STD-2154A 6S100 PIERCE SPAFFORD, MELTED AND PROCESSED IN THE U.K. | | | | | | | | | | | | | | |
| Test Ref: | Weight: | Yield Proof stress T _{0.2} /N/mm ² | Max Stress T _{max} /N/mm ² | Elongation | | Brinell | | HV | HRC | Impact Fl. Lbs Joules | R/Area | | | |
| | | | | GL | % | Test Specimen | Range on Bars | | | | | | | |
| S 7538 | 572 | 113 | 132 | 2.0" | 21.6 | | | | | | 67.0 | | | |
| S 7540 | 580 | 113 | 133 | 2.0" | 21.0 | | | | | | 68.0 | | | |
| S 7541 | 564 | 113 | 133 | 2.0" | 20.9 | | | | | | 67.0 | | | |
| Specification: | | (2.0) 100KPSI | 132/144KPSI | 17% MIN | | | | | | | 55% MIN | | | |
| REMARKS: HARDENED, TEMPERED AND COLD DRAWN. RAW MATERIAL SOURCE: TATA STEEL U.K. LIMITED. TATA STEEL INSPECTION CERTIFICATE ATTACHED. DECARBURISATION: UPTO .012" PARTIAL. <div style="text-align: right;"> MT # <u>2893</u> TVE QA Inspector Stamp # <u>703</u> Date: <u>DEC 09 2013</u> </div> | | | | | | | | | | | | | | |
| HEAT TREATMENT DETAILS: <div style="display: flex; justify-content: space-between;"> <div> HARDENED TEMPERED </div> <div> SPECIFIED: 840/860°C NONE SPECIFIED </div> <div> ACTUAL: 860°C OQ. 600°C AC. </div> </div> | | | | | | | | | | | | | | |
| Cast No. | C. | SL | WT. | P. | S. | Cr. | Mn. | ML | Cu. | Sn. | AL | V. | TI | |
| A1332U | 3050 | 2700 | .5300 | .0110 | .0013 | .9800 | .1800 | .1300 | .1600 | .0100 | .0240 | .0020 | .0003 | |

| | | |
|--|---|--|
| CERTIFIED: That the whole of the supplies detailed hereon have been inspected, tested and - unless otherwise stated above conform in all respects with the requirements of the contract/order. The quality control arrangements adopted in respect of these supplies have accorded with the conditions of our K.P.S. registration. Signed: <u>[Signature]</u> Date: <u>27/6/13</u> Approved signatory for and on behalf of K.P.S. | Inspectors Stamp K.P. Aero. <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">1</div> | CERTIFIED: That unless stated above the whole of the above mentioned materials have been manufactured, tested and inspected in accordance with the terms of the contract/order applicable thereto and conform fully to the standards/specifications quoted hereon. Signed: <u>[Signature]</u> Date: <u>27/6/13</u> Approved signatory for and on behalf of K.P.S. |
|--|---|--|

**MRS. J. CARROLL
Q.C. SECRETARY**

OK 11/12/13



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO27256

| LNE# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER | CCODE | MFR DATE | EXP DATE |
|------|----------|-----|-------------|-----------|------------|---------------|-------|----------|----------|
| 2 | 500 | EA | MS24694S50 | | 65121 | MAC FASTENERS | ORFT4 | | |


Jason Lewis
Senior Director, Global Quality

01/28/15

Inv # 01/28/15

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER: B/E AEROSPACE

PO: 0KTR91

PART NUMBER: MS24694-S50

REV: 2

LOT NUMBER: 65121

MANUFACTURED QUANTITY: 270,000

MILL HEAT NUMBER: 8172051

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners Inc. certifies that the parts referenced in the above lot number do not contain Mercury or Mercury compounds, and were manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC FASTENERS, INC. within the United States, and were processed in accordance with all applicable drawings and specifications.

Objective evidence of compliance is on file, subject to examination upon request

DATE: 01/21/14


QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company- SAI GLOBAL - 0058029

CHEMICAL & PHYSICAL TEST REPORT

| MATERIAL | | | | MATERIAL SPECIFICATION | | | | MILL HEAT NUMBER | | | SUPPLIER | | |
|-----------|-----|-------|------|------------------------|-----|-----|-----|------------------|------|---|-----------|-------|----|
| TYPE 8740 | | | | MIL-S-6049/AMS6322 | | | | 8172051 | | | JOHNSTOWN | | |
| C | Si | Mn | P | S | Cu | Ni | Cr | Mo | V | B | Fe | Al | Ti |
| .40 | .25 | .86 | .010 | .011 | .09 | .44 | .49 | .22 | .003 | | | .026 | |
| | Co | N | Bi | Pb | Mg | Zn | | Nb | Sn | | | Other | |
| | | .0043 | | | | | | | .006 | | | | |

| METALLURGICAL EXAMINATION | | | |
|---|-------------------------------------|---------------------------------------|--|
| Discontinuities | <input checked="" type="checkbox"/> | Carb/Decarb | <input checked="" type="checkbox"/> |
| Grain Flow | <input checked="" type="checkbox"/> | Microstructure | <input checked="" type="checkbox"/> |
| Grain Size | <input checked="" type="checkbox"/> | Appearance | <input checked="" type="checkbox"/> |
| Thread Inspection FED-STD-H28/20 - ASME B1.3 | | System <input type="checkbox"/> 21 | System <input checked="" type="checkbox"/> 22 |
| | | | System <input type="checkbox"/> 23 |

AS9100C REGISTERED
SAI GLOBAL - 0058029

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

HEAT TREAT CERTIFICATION

CUSTOMER: B/E AEROSPACE

DATE: 01/21/14

PO NUMBER: 0KTR91

MANUFACTURED QUANTITY: 270,000

PROCESSOR:

PAULO PRODUCTS KCMO - NADCAP ID 4679

LOT NUMBER: 65121

MATERIAL: TYPE 8740

PART NUMBER: MS24694-S50

REVISION: 2

REQUIRED HARDNESS: 26 - 32 HRC

SAMPLE SIZE: 13

HARDNESS: 27 - 30 HRC

HEAT TREAT SPECIFICATION AS APPLICABLE: MIL-H-6875/AMS-H-6875/AMS2759/AMS5853/PS-1001

Notes:

The fasteners referenced in this report have been processed, inspected and certified by the Heat Treat Contractor in accordance with all applicable drawings and specifications. Heat Treatment has been verified in accordance with procurement specification and part drawing, by metallurgical and mechanical testing as applicable. Evidence of compliance as well as certification from the Heat Treat Contractor is on file and subject to examination upon request.


QUALITY ASSURANCE REPRESENTATIVE

MacFasteners, Inc. is an AS9100C Registered Company - SAI GLOBAL - 0058029



Johnstown Wire Technologies

124 Laurel Ave,
Johnstown, PA 15906

Phone: 814-532-5680
Fax: 814-532-5684

WORK ORDER
883637

TEST REPORT

LOT NUMBER

K-8172051

SALES ORDER / RLS

002641 / 1

SOLD TO

Mac Fasteners, Inc.
C/O TD Logistics Inc.
14505 W 100th Street
Lenexa, KS 66215
USA



| | | | | | | | | | | | | |
|--|---------------|------------------------|-------------|-----------------------|-----------------------------|-----|---------|-----|-----|------|----|----|
| CUSTOMER P.O. 50516 | CUSTOMER PART | QUANTITY 27,381 LBS | COILS 14 | LADING NO 00120503 | SHIPMENT DATE 10/22/2013 | | | | | | | |
| SPECIFICATION MacFast-87186 AMS2301; AMS6322; AMS-S-6049A; MIL-S-6049A 8740 DFARS Defense Federal Acquisition Regulation Supplement Silicon Killed Fine Grain Aircraft Quality/Cold Heading Quality Drawn From Annealed Rod Spheroidize Annealed In Process Heavy Phos & Light Lube Ctd Size: .1865 +.001 -.000 | | | | | | | | | | | | |
| CERTIFICATION REQUIREMENTS | | | | | | | | | | | | |
| Chemical | | | | | | | | | | | | |
| C | Mn | P | S | Si | Al | Ni | Cr | Mo | Cu | V | | |
| .40 | .86 | .010 | .011 | .25 | .026 | .44 | .49 | .22 | .09 | .003 | | |
| Cb | Ti | N | Sn | | | | | | | | | |
| .001 | ???????? | .0043 | .006 | | | | | | | | | |
| Physical | | | | | | | | | | | | |
| AMS 2301 | J1 | J10 | J11 | J12 | J2 | J3 | J5 | J4 | J6 | J7 | J8 | J9 |
| 0000 | 58 | 42 | 39 | 38 | 57 | 56 | 55 | 56 | 54 | 51 | 48 | 45 |
| MacroClean E-381 | | | | | | | | | | | | |
| 111 | | | | | | | | | | | | |
| Mechanical | | | | | | | | | | | | |
| TEST | UNITS | | HIGH | | LOW | | AVERAGE | | | | | |
| Tensile Str | Lbs/SqIn | | 83000 | | 80000 | | 81000 | | | | | |
| RA Per Cent | Percent | | 73.1 | | 71.9 | | 72.5 | | | | | |
| Decarb FFD | Inches | | .000 | | .000 | | .000 | | | | | |
| Surface def. depth | Inches | | .000 | | .000 | | .000 | | | | | |
| Rod / Melt Source | | | | | | | | | | | | |
| Rod Source | Melt Source | Country of Origin | | Nafta | | | | | | | | |
| Republic | Republic | USA | | Yes | | | | | | | | |
| End of Certification | | | | | | | | | | | | |

I certify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested

Daniel J. Malik
Daniel J. Malik, Director of Quality Assurance



1807 EAST 28TH ST.
PHONES: 800-438-5380

LORAIN, OH 44055
FAX: 330-438-5685

CERTIFICATE OF TESTS

REPUBLIC STEEL

6/25/2013
11:08:00 AM
PAGE 1 OF 2

PURCHASE ORD: 84084
PART NUMBER: FXT40AA-.375
ORDER NUMBER: 1547434 - 01
HEAT: 8172051

PURCHASE ORDER DATE: 3/4/2013
ACCOUNT NUMBER: 5672-1921-01
SCHEDULE: 6101-93
REVISION: 1

===== CHARGE ADDRESS ===== SHIP TO =====

JOHNSTOWN WIRE TECHNOLOGIES
124 LAUREL AVE
JOHNSTOWN, PA 15906

JOHNSTOWN WIRE TECHNOLOGIES
EDWARD ZAPOLA
C/O C & BL RAILROAD
TRACK 629
JOHNSTOWN, PA 15901

----- MATERIAL DESCRIPTION -----
HOT ROLLED STEEL COILS ALLOY AMS 2301K JOHNSTOWN WIRE SPEC RW-100 REVISION DTD 04/21/04 EXC PARA
10.3 AMS 6322N EXC HARD JOHNSTOWN WIRE SPEC RW-005 REVISION DTD 12/31/00 EXC SURFACE DEFECTS
JOHNSTOWN WIRE SPEC PART NO. FXT40AA REVISION DTD 12/31/00 MIL S 6049A & AMD 1 COND B-1 EXC MARK &
UT WAIVED EF-AISI-8740-H FINE GRAIN VACUUM DEGAUSSED AIRCRAFT QUALITY FIXED PRACTICE QUALITY
RESTRICTED CHEMISTRY RESTRICTED MAX INCIDENTAL ELEMENTS
SIZE: RDS .3750 DIAM X COIL
RDS 9.5250MM DIAM X COIL

| LADLE CHEMISTRY % | | | | | | | |
|-------------------|------|-------|-------|--------|-------|--------|------|
| C | MN | P | S | SI | CU | NI | CR |
| 0.40 | 0.86 | 0.010 | 0.011 | 0.25 | 0.09 | 0.44 | 0.49 |
| V | MO | SN | AL | B | CB | N | |
| 0.003 | 0.22 | 0.006 | 0.026 | 0.0001 | 0.001 | 0.0043 | |

CALCULATED TESTS

REDUCTION RATIO 1,177.6 TO 1

AUSTENITIC GRAIN SIZE 5 OR FINER BASED ON A TOTAL ALUMINUM CONTENT EQUAL TO OR GREATER THAN .020% PER ASTM A29.

----- SEMI - FINISHED RESULTS -----

JOMINY HARDNESS TEST SAE J406/ASTM A255
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32
58 57 56 55 54 51 48 45 42 39 38 36 34 34 33 32 31 30 29 29 29 28 28

MACRO ETCH TEST ASTM E381/MIL STD 430
ETCHANT: HCL. TEMPERATURE: 170

| | S | R | C |
|-----|---|---|---|
| AVG | 1 | 1 | 1 |

MAGNETIC PARTICLE TEST AMS 2301 AMS2304 AMS2300
IND AVG IND AVG
FREQ FREQ SEV SEV
PCE 03 0 0 0 0

----- FINISHED SIZE RESULTS -----

DECARBURIZATION TEST SAE J419/ASTM E1077/JIS G0558
ETCHANT = NITAL MAGNIFICATION = 100X

| | SPIKE INCHES | COMPLETE INCHES | TOTAL DEPTH INCHES |
|----------|-----------------|--------------------|--------------------------|
| PCE 6579 | 0.002 | 0 | 0.001 |

G. KRUTH
DIRECTOR QUALITY ASSURANCE

BY DEBORAH STOKES

DE TRAY

Plating Works

Specialized Electro-Plating and Polishing
Nickel
Copper
Decorative Chrome
Satin Chrome
Zinc
Cadmium
Passivate
Bright Dip
Strip Copper
Descale

10405 EAST ELEVENTH STREET • INDEPENDENCE, MISSOURI 64052
Phone (816) 252-8411 Fax (816) 252-8527 • E-mail: DeTrayPlating@Aol.com

January 17, 2014

Mac Fasteners
1110 East Enterprise Street
Ottawa, Kansas 66067

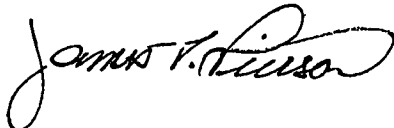
Subject: Certification

This is to certify that the following parts have been cadmium plated per QQ-P416/AMS-QQ-P-416/NAS4160/AMS2400, Type II, Class 3. Please reference our Invoice# 176159 dated 1/17/2014 for:

Lot#- 65121

P.N.- MS24694S50

James T. Pierson, Vice-President



DE TRAY PLATING WORKS



P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.KLXAerospace.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to KLX Aerospace Solutions.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO27256

| LINE# | QUANTITY | U/M | PART-NUMBER | CUST REF# | LOT-NUMBER | MANUFACTURER | CCODE | MFR DATE | EXP DATE |
|-------|----------|-----|--------------|-----------|------------|----------------------|-------|----------|----------|
| 3 | 200 | EA | MS21209F7-15 | | 786832 | EMHART TEKNOLOGIES L | 01556 | | |



Jason Lewis
Senior Director, Global Quality

01/28/15

Inv # 01/28/15

Certificate of Compliance

To: B/E Aerospace Consumables
Mgmt.
P.O. Box 025263
Miami FL 33102-5263

Customer's Order No. 0SYW08
Sales Order No. 537928 SO
Shipping Date 04/08/14

Non-transferable

| PART NUMBER | CONTROL NUMBER | I / A / W | QUANTITY |
|--------------------------------------|--------------------|--------------|-----------|
| 3591-7CN656 Country of Origin: US | 713984 (W-5049871) | MS21209F7-15 | 131.000 |
| 3591-7CN656 Country of Origin: US | 713984 (W-5049871) | MS21209F7-15 | 6.000 |
| 3591-7CN656 Country of Origin: US | 786832 (W-5054121) | MS21209F7-15 | 14863.000 |

We, STANLEY Engineered Fastening certify that all items listed above and supplied on the above mentioned Purchase Order have been inspected and comply in every way with the relevant drawings and/or specifications in accordance with your requirements.

We further certify that all stainless steel inserts supplied on the above Purchase Order have been inspected and comply in all respects with the applicable drawings and with the chemical composition and physical property requirements of AS7245 Rev A and ASME SA-479. All testing & sampling plans apply per NASM8846 Rev. 1.

In addition, those stainless steel inserts covered by National Aerospace Standards MS21208, NASM21209 Rev 3, NASM122076 thru NASM122275 Rev 1, NASM124651 thru NASM124850 Rev 1, MS9018 Rev A and National Aerospace Specification NASM8846 Rev 1 are certified to conform thereof.

We also certify that all inconel inserts supplied on the above Purchase Order have been inspected and comply in all respects with the applicable drawing and with the chemical composition and physical property requirements of AS7246 Rev NEW. All testing & sampling plans apply per NASM8846 Rev. 1.

We further certify that Tangles® inserts are in conformance with NAS1130 Rev 5 and NA0276 Rev 3. Tangles is a registered trademark of Advanex, Inc. (JP) used under license.

Metric Heli-Coil® inserts are covered by the following Aerospace Standards MA3279 Rev B, MA3280 Rev B, MA3281 Rev B, MA3329 Rev C, MA3330 Rev C, MA3331 Rev C and MA1565 Rev A.

STANLEY Engineered Fastening maintains a single standard of quality and the Quality Assurance Program has been designed to comply with the requirements of ISO 9001:2008, AS9100:2009 Rev C, and TS16949:2009.

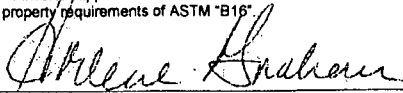
We further certify that the parts supplied are free from mercury contamination and that mercury in any form, including mercury thermometers, was not used in manufacture or testing of the parts.

DFARS 252.225-7009 applies to articles containing specialty metals. We further certify that any tools and kits with an NSN number and Heli-Coil wire inserts supplied on the above Purchase Order comply with the requirements of section 252.225-7015 of DFARS.

The Quality Assurance Program, inspection records, chemical composition and physical analysis reports and special process certification are available for your review at our plant in Danbury, Connecticut at any time during normal business hours.

We also certify that all brass inserts supplied on the above Purchase Order have been inspected and comply in all respects with the applicable drawing and with the chemical composition and physical property requirements of ASTM "B16".

Authorized Signature



Emhart Technologies LLC, a business division of
Firm STANLEY Engineered Fastening

A StanleyBlack&Decker, Inc. Company

This certificate of compliance is valid only when issued by STANLEY Engineered Fastening, 4 Shelter Rock Lane, Danbury, Connecticut 06810 or its authorized distributors. Any correspondence should reference the control number.

PERTH, ON
ERIN, ON
DUMAS, AR
LANCASTER, SC

813-267-3752 FAX 613-287-5617
619-833-9632 FAX 619-833-2213
870-382-2880 FAX 870-382-8988
803-283-3353 FAX 803-283-8303



Drawing on Innovation
CENTRAL WIRE INDUSTRIES

FOND DU LAC, WI
UNION, IL
PERRIS, CA

920-926-0609 FAX 920-926-0652
815-923-2131 FAX 815-923-2128
951-857-2105 FAX 951-943-8061

THE LEADING MANUFACTURER OF STAINLESS STEEL AND NICKEL ALLOY WIRE PRODUCTS
EXECUTIVE OFFICES: PERTH, ON CANADA - EMAIL: sales@centralwire.com

CENTRAL WIRE INDUSTRIES LTD.
1 NORTH STREET, PERTH, ONTARIO, CANADA K7H2S2
TEL: 613-267-3752 1-888-267-3761
FAX: 613-267-3929/2951 SALES FAX: 613-267-5617

CERTIFICATE OF CONFORMANCE

SOLD
TO

EMHART TEKNOLOGIES LLC
P.O. BOX 50918
INDIANAPOLIS

IN 46250

USA

SHIP
TO

EMHART TEKNOLOGIES LLC
SHELTER ROCK LANE
DANBURY

CT 06810

USA

| CUSTOMER'S PO NO. | TYPE OF CERT | CUSTOMER | ORDER NO. | WORK ORDER | DATE SHIPPED |
|-------------------|--------------|----------|-----------|------------|--------------|
| 841702 ✓ | Customer | 110394 | 2028851 7 | 5054121 | 12/20/13 |

SPECIFICATIONS:

MS2 Issue CR, AS7245 Rev.A paragraphs 2 & 3.1 ✓

p/n: WR-WC-0475 ✓

W-5054121

| ITEM DESCRIPTION | | |
|--|--|--------|
| DESCRIPTION | SPEC. CLASS | HEAT |
| CHQ 304 ✓ FULL HARD Bright .0475 500LB PLReel Clean | Melt mill ✓ NAS Country of origin ✓ USA | J7A7 ✓ |
| | QTY SHIP 4345 ✓ | 025 |

| CHEMICAL ANALYSIS | | | | | | |
|-------------------|-----------------|---------------|--------------|-------------|-----------------|----------------|
| C .0709 ✓ | SI .3795 ✓ | MN .4865 ✓ | P .0260 ✓ | S .001 ✓ | CR 18.0395 ✓ | NI 8.0065 ✓ |
| MO .1490 ✓ | FE Balance ✓ | CU .2040 ✓ | N .0511 ✓ | | | |
| | | | | | | |

| MECHANICAL PROPERTIES | | | | | | |
|------------------------------|------------------------------|----------------------------|----------------------------|----------------------|--|--|
| AS SHIPPED PROPERTIES: | | | | | | |
| DIAMETER .04751" ✓ | TENSILE 198.200/ KSI ✓ | YIELD 177.200/ KSI ✓ | ELONGATION 2.500 % ✓ | Y/T RATIO 0.890 ✓ | | |
| AFTER HEAT TREAT PROPERTIES: | | | | | | |
| | | | | | | |

CHEMICAL ANALYSIS O.K.

JAN 03 2014

QUALITY ASSURANCE

HELI-COIL PROD.

Wire was solution annealed at 1900F min before final draw ✓
Passed cold bend, coil and stretch test. ✓ Tested to ASTM A479-04 ✓
Raw material is DFARS 252.225-7009 compliant. ✓ Rod produced by USA ✓

The material as shipped is free from mercury contamination. I certify the chemical analysis and physical and mechanical test results reported above are correct as contained in the records of the company.

Very truly yours,

A. Thomas

AUTHORIZED SIGNATURE



TORQUE TEST REPORT

Stanley Black & Decker

| | | | |
|----------------------------|------------------------------|-----------------------------|------------------------------|
| PART NUMBER 3591-7CN656 | WIRE LOT NUMBER W-5054121 | WORK ORDER NUMBER 786832 | WORK ORDER QUANTITY 25000 |
| THREAD SIZE 7/16-20 S/L | SPECIFICATION NUMBER PP3 | UNITS LB-IN | MACHINE NUMBER 369 |

PLATED ☐

AFTER H/T ☐

BEFORE H/T ☐

1st PIECE ☐

IN-PROCESS ☐

FINAL ☒

| S P E C S | 1st. CYCLE | | | | 7th CYCLE | | 15th CYCLE | |
|-----------------------|--------------|-----|-----------|-----|--------------|-----|------------|-----|
| | INSTALLATION | | BREAKAWAY | | INSTALLATION | | REMOVAL | |
| | 100 LB-IN | MAX | 14 LB-IN | MIN | 100 LB-IN | MAX | 14 LB-IN | MIN |
| TEST RESULTS | | | | | | | | |
| 1 | 49.2 | MAX | 42.4 | MIN | 31.2 | MAX | 22.4 | MIN |
| 2 | | MAX | | MIN | | MAX | | MIN |
| 3 | | MAX | | MIN | | MAX | | MIN |
| 4 | | MAX | | MIN | | MAX | | MIN |
| 5 | | MAX | | MIN | | MAX | | MIN |
| 6 | | MAX | | MIN | | MAX | | MIN |

| | | |
|-------------------------|-------------------|-----------------|
| DISPOSITION ACCEPTED | INSPECTOR 2592 | DATE 3.24.14 |
|-------------------------|-------------------|-----------------|